IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Wainwright et al.

Examiner: Drew E. Becker

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For: AMYLOPECTIN POTATO FLAKES OR GRANULES AND THEIR USE IN SNACK FOODS

Dated: February 11, 2009

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132

I, Pieter L. Buwalda, state the following:

1. I am a Food Starch Specialist at the Food Competence Center of the international co-operative AVEBE in Foxhol, The Netherlands, the world's largest manufacturer of potato starch derivatives. I took up this position on December 1 of 2001.

2. Before my current position, I was associated with the Chemistry Department of AVEBE for a period of almost twelve years where I performed research on various starch applications, the last five years mainly food oriented. My specialization is Chemistry of Starch.

3. I hold a Ph.D. degree in Organic Chemistry from the University of Groningen, the Netherlands, and have written a number of publications and am a co-inventor of various patents relating to Starch Chemistry. In 1997, for instance, I acted as an author on Granular and Molecular Structure of Starch, The 3rd CAFST International Symposium, page 109.

4. A list of my publications was attached to the declaration filed on November 18, 2005.

5. High amylopectin starches, in particular of cereals such as corn, have been known since the beginning of the 20th century. High amylopectin potato starch has only become available in the 1990's.

6. Research conducted using amylopectin starch derived from potatoes has been reported in my article, *Buwalda* ("Sheer Versatility" *Potato Business World* May/June 1998), cited by the Examiner. In particular, the Examiner has relied on a disclosure that isolated amylopectin starch is used in food for its expansion properties. This is not completely correct. The *Buwalda* article only indicates that "starch coatings" in snacks give good expansion properties. There is no indication that such properties exist when amylopectin starch is used as an ingredient in a dough.

7. Although high amylopectin starches, in particular waxy corn starch, are known for use as **additive** to a dough, the use of high amylopectin starch as substantially the sole base for snack products has always been regarded as unsatisfactory. In particular, it was thought that the application of high amylopectin starch as substantially the sole base for doughs leads to ill quality products. If the doughs expand at all, their texture is like "styrofoam", i.e., unpleasantly tough and not crisp. Most often, however, the expansion is insufficient and the resulting products are very (tooth breaking) hard. Also see the paragraph bridging pages 4 and 5 of the specification.

8. The viscosity of drum dried high amylopectin potato starch is *half* that of the viscosity of drum dried normal potato starch. On the other hand, the viscosity of drum dried high amylopectin potato pieces (e.g., flakes) is *twice* as great as the viscosity of drum dried normal potato pieces. Thus, knowledge of the properties of high amylopectin potato starch does not predict the properties of high amylopectin potato pieces.

9. In fact, if any prediction were to be made, since the viscosity trend of high amylopectin potato starch opposes the viscosity trend of high amylopectin potato pieces *vis-à-vis* their normal potato counterparts, it may be inferred that other properties of the starch versus the pieces would similarly show an opposing trend. For example, since amylopectin potato starch showed an increased expansion in snacks, it may have been expected that high amylopectin potato pieces would have deterred expansion as a component. This may be particularly true since it is known that waxy corn pieces deter expansion. (See paragraph 7 above.)

10. In conclusion, the knowledge of the behavior of high amylopectin potato starch in coating applications would not have taught about the impact of using high amylopectin potato pieces as the base of a snack food. In fact, the expansion properties yielded by high amylopectin potato starch coatings may have lead a skilled artisan to believe that high amylopectin potato pieces used as a substantial component (e.g., sole component) of a snack food would have deterred expansion.

11. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true. Further that these statements were made with the knowledge that willfully false statements, and the like, so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willfully false statements may jeopardize the validity of the application of any patent issued thereon.

Pieter L. Buwalda, Ph.D.